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EXAMINER

HUYNH, KHOA B

ART UNIT

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2416

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/572,965

Examiner

KHOA HUYNH

Applicant(s)

SAFFRE, FABRICE T. P.

Art Unit

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2008.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-845)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

#### DETAILED ACTION

1. This Office Action is in response to the Applicants' amendment received on 12/26/2008.

#### Claim Status

2. Claims 1, 3-5 are amended.
3. Claims 2, 6 are cancelled.
4. Claims 9-10 are newly added.
5. Claims 1, 3-5, 7-10 are currently presenting for examination, with claims 1, 5 being independent.

#### Specification

6. Amendments to the specification and title have been received. Therefore, objections to the specification and title are withdrawn
7. This action has been made FINAL.

#### *Response to Arguments*

8. Applicant's arguments with respect to claims 1, 5, 6-10 filed 12/26/2008 have been fully considered but they are not persuasive.

9. Regarding applicant's arguments with respect to claim 1 and 5 concerning limitation "ranking the users currently requiring access according to the measured usage relative to the other users". It is unclear to the Examiner whether the ranking is relative to other users or the measuring usage is relative to other users. Furthermore, are "the other users" includes only the other currently requiring access users, or do they also includes offline users? Also the phrase "relative to the other users" is itself unclear. Because, when a user is ranked, it is always done relative to other users, unless there are no other users. In another word, the act of ranking itself describes relationships among users. The same principle applies to measuring. The act of measuring itself, in a shared resource environment, describes relationship among users. Shared resources are shared by multiple users. Each user uses the resources relative to other users (when one user get more resources, other users get less, since resources are limited).
10. Regarding applicant's arguments with respect to claims 1 and 5 concerning the assertion that "only those users currently connected are allocated any bandwidth at all by the bandwidth control algorithm". Examiner could not find this assertion in claim 1 or claim 5 or any of the dependent claims. Claim 1 only describes "restricting the availability of resource to each user currently requiring access by applying a restriction factor", claim 1 clearly doesn't describe "allocates bandwidth only to user currently connected". The act of restricting the availability of resource of each user currently requiring access does not exclude users who are not requesting access from being allocates bandwidth. Claim 5 only describes, "making the resource available to each user to an extent determined by the restriction factor and the number of users currently

requiring access", claim 5 clearly doesn't describe "allocates bandwidth only to user currently connected". In claim 5, resources are made available to each user, but is unclear who these "each user" are. Also, the act of making the resource available to user currently connected does not exclude the resource from being allocated to user not currently connected. Amalfitano teaches that requests for access (which are made by users currently requesting bandwidth) are queued depending on a user's priority level which is based on usage (*Amalfitano, page 3, paragraph 41*). Amalfitano clearly allocates bandwidth to users currently request for it through a queue.

11. Regarding applicant's arguments on page 15, paragraph 1 and 2. These assertions are only available in the disclosure, and are not described in the claims themselves. Amalfitano's requests for access are queued depending on a user's priority level (*Amalfitano, page 3, paragraph 41*). If there are fewer requests from users of a high priority level, then requests from lower priority level would be processed more quickly, hence allocation is a function of overall demand and availability. When overall demand is low, there will be fewer requests in the queue; heavy users would be able to take advantage of it more

12. Regarding applicant's arguments with respect to claim 9, 10 concerning "giving each user a unique ranking". Amalfitano describes giving a unique ranking to each user group (*Amalfitano, page 1, paragraph 8*). Each user group can contain one user or multiple user. Nothing prevents a user from a "one user group" being assigned a ranking that is different from the rankings that are assigned to other users. Furthermore, Amalfitano teaches that "*With the invention, the grade of service experienced by any*

*particular user depends upon historical use, plus the continuity of resource demand"* (Amalfitano, page 1, paragraph 11, lines 1-3.). Since the historical use and demand of each user is unique, the ranking (grade of service), which is based on these factors is also unique.

13. Regarding applicant's arguments on page 16, paragraph 3, concerning "applicant's system relies solely on comparison with other users, and is automatically and periodically adaptable to changes in demand and available capacity". This assertion is not described in the claims.

14. Applicant's arguments with respect to claim 6 (canceled, incorporated into claim 5) and 7-8, which are dependents of claim 5, are moot due to resolutions of issues already addressed above.

### *Claim Rejections - 35 USC § 102*

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 1, 4, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Amalfitano, US 2001/0033557.

17. For independent claim 1,

Amalfitano discloses: A method of controlling access to a communications resource (*Amalfitano, page 1, paragraph 8, lines 7-8, "a scheme for assigning priority levels to users based upon a history of their request for access to the resources"*) in which the maximum capacity made available to each of a plurality of users bears an inverse relationship to the usage of the resource made by that user over a previous period, relative to the usage made by the other users (*Amalfitano, page 1, paragraph 8, lines 8-15, "If a user has, over a historical period of time, made fewer demands than a stated amount, that user is given a higher priority than a user who has made greater use of the resources than their stated amount. Thus, users making the heaviest demand on the available resources are allocated fewer resources despite their demand, whereas users that make less demands for the resources are granted more of the resources they request"; the more resource a user uses, the less of their requests are granted; relative to the usage made by other users mean the more resources one user is granted, the less is available to the rest of the users since resource is limited*), said method comprising:

measuring the usage of the resource made by each user over a predetermined period (*Amalfitano, fig 2, usage of each user over a month is being measured; Amalfitano, page 3, paragraph 36, lines 1-2, "FIG. 2 is a graph illustrating resource usage by a particular user over a course of a month"*)

ranking the users currently requiring access according to the measured usage relative to the other users (*Amalfitano, fig 1, element 160: queue. Amalfitano, page 3, paragraph 41, lines 2-3, "queue 160 maintains lists of access requests organized by*

*priority level"; users are ranked relative to other users by putting their access requests in a queue organized by priority level, which is based measured usage; Amalfitano, page 1, paragraph 8, lines 8-15, "If a user has, over a historical period of time, made fewer demands than a stated amount, that user is given a higher priority than a user who has made greater use of the resources than their stated amount. Thus, users making the heaviest demand on the available resources are allocated fewer resources despite their demand, whereas users that make less demands for the resources are granted more of the resources they request";)*

and restricting the availability of resource to each user currently requiring access by applying a restriction factor to each user according to that user's ranking and the number of users currently requiring access (*Amalfitano, fig 1, element 160: queue. Amalfitano, page 3, paragraph 41, lines 2-3, "queue 160 maintains lists of access requests organized by priority level"; users are ranked relative to other users by putting their access requests in a queue organized by priority level, which is based measured usage; Amalfitano, paragraph 55, 57: x and y are restriction factors which are applied to each user, x and y are based on each user's priority level and p1, p2 which are percent of current user at each level).*

18. For claim 4,

Amalfitano discloses: the restriction factor allocated to the user having made the least usage over the previous period is unity (*Amalfitano, page 4, paragraph 56, for*



*two priority levels, restriction factor allocated to user having made the least usage is  $x=1.08$ , as the number of priority levels increases,  $x$  will go to 1, unity)*

19. For claim 9,

Amalfitano discloses: each user is given a unique ranking (*Amalfitano, page 1, paragraph 11, lines 1-3, "With the invention, the grade of service experienced by any particular user depends upon historical use, plus the continuity of resource demand"; Since the historical use and demand of each user is unique, the ranking (users are ranked by putting their requests in a queue) is also unique*; Amalfitano describes giving a unique ranking to each user group (*Amalfitano, page 1, paragraph 8*). Each user group can contain one user or multiple user. Nothing prevents a user from a "one user group" being assigned a ranking that is different from the rankings that are assigned to other users).

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*Claim Rejections - 35 USC § 103*

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

21. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1,148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

22. Claims 5, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amalfitano, US 2001/0033557 in view of Otis US 6,085,241.

23. For independent claim 5,

Amalfitano discloses: apparatus for controlling access to a communications resource (*Amalfitano, fig 1, element 145, WIF: wireless interface facility; Amalfitano, page 2, paragraph 32, lines 6-7, "Management and allocation of wireless channels 130 is provided by WIF 145 and corresponding resources 150"*) having means for allocating capacity to each of a plurality of users (*Amalfitano, fig 1, element 145, WIF: wireless interface facility allocates resources to users 105-A to 105-Z*) in inverse relationship to the usage of the resource made by that user over a previous period, relative to the usage made by the other users (*Amalfitano, page 1, paragraph 8, lines 8-15, "if a user has, over a historical period of time, made fewer demands than a stated amount, that user is given a higher priority than a user who has made greater use of the resources than their stated amount. Thus, users making the heaviest demand on the available resources are allocated fewer resources despite their demand, whereas users*

*that make less demands for the resources are granted more of the resources they request"; the more resource a user uses, the less of their requests are granted; relative to the usage made by other users mean the more resources one user is granted, the less is available to the rest of the users since resource is limited), said apparatus comprising.;*

*... measuring the usage of the resource made by each user over a predetermined period (Amalfitano, fig 2, usage of each user over a month is being measured; Amalfitano, page 3, paragraph 36, lines 1-2, "FIG. 2 is a graph illustrating resource usage by a particular user over a course of a month");*

*sorting means (Amalfitano, fig 1, element 160: queue) for ranking the connected users according to the measured usage relative to the other users (Amalfitano, fig 1, element 160: queue. Amalfitano, page 3, paragraph 41, lines 2-3, "queue 160 maintains lists of access requests organized by priority level"; users are ranked relative to other users by putting their access requests in a queue organized by priority level, which is based measured usage; Amalfitano, page 1, paragraph 8, lines 8-15, "If a user has, over a historical period of time, made fewer demands than a stated amount, that user is given a higher priority than a user who has made greater use of the resources than their stated amount. Thus, users making the heaviest demand on the available resources are allocated fewer resources despite their demand, whereas users that make less demands for the resources are granted more of the resources they request");*

... calculating a restriction factor for each user according to that user's ranking (*Amalfitano, paragraph 55, 57: x and y are restriction factors which are applied to each user, x and y are based on each user's priority level/ranking and p1, p2 which are percent of current user at each level*);

... making the resource available to each user to an extent determined by the restriction factor and the number of users currently requiring access (*Amalfitano, page 3, paragraph 41, lines 6-7, "As requests are popped off the queue, they are assigned to resources according to priority level"; the more users currently requiring access, the less resources will be available, therefore, the resource available is determined not only by the restriction factor but also the number of users currently requiring access*)

Amalfitano discloses all the subject matter of the claimed invention with the following exceptions: measuring means, calculating means, access control means

Otis from the same or similar fields of endeavor discloses: means for measuring usage of resource (*Otis, column 4, lines 16-19, "the bandwidth manager 10 can be used to monitor "TCP/IP" traffic and provides real-time bandwidth usage data in various reports formatted in HTML. "; bandwidth usage is usage of resource*)

means for calculating a restriction factor (*Otis, column 5, lines 32-35, "As each IP-address under management sends or receives a data packet, the respective CPU 11 or 12 computes the running bandwidth demands for that address. A bandwidth limit value is associated with each IP-addresses under management", bandwidth limit value, which is a restriction factor, is calculated using CPU*)

access control means (*Otis, column 5, lines 38-47, "if the on-the-fly computation of the running bandwidth demand shows that the IP-address under management is not operating within its allowed bandwidth, the data packet may be delayed for delivery at a less congested time or simply dropped altogether. The data packet delay mechanism can be implemented with a circular ring buffer maintained in MEMs 13 and 14 that stores as much as two seconds worth of full-duplex data at the maximum rates"; data delay mechanism controls access*)

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use Otis' bandwidth manager (which includes measuring means, calculating means, access control means) to implement Amalfitano's techniques since "Internet access bandwidth is both a critical resource and a key cost factor for ISP's in particular. Reliable bandwidth usage auditing and monitoring is important in web hosting businesses" (*Otis, column 2, lines 9-12*). This method of implementing Amalfitano's techniques was within the ordinary ability of one of ordinary skill in the art based on the teaching of Otis. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Amalfitano and Otis to obtain the invention.

24. For claim 10,

Amalfitano discloses: give a unique ranking to each connected user (*Amalfitano, page 1, paragraph 11, lines 1-3, "With the invention, the grade of service experienced by any particular user depends upon historical use, plus the continuity of resource demand"; Since the historical use and demand of each user is unique, the ranking*

*(users are ranked by putting their requests in a queue) is also unique; Amalfitano describes giving a unique ranking to each user group (Amalfitano, page 1, paragraph 8). Each user group can contain one user or multiple users. Nothing prevents a user from a "one user group" being assigned a ranking that is different from the rankings that are assigned to other users).*

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25. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amalfitano, US 2001/0033557 and Otis US 6,085,241 as applied to claim 5 above and further in view of Chuah US 6,567,416.

26. For claim 7,

Amalfitano and Otis disclose all the subject matter of the claimed invention with the following exceptions: associated with a modem associated with a server controlling access to the internet

Chuah from the same or similar fields of endeavor discloses: associated with a modem (*Chuah, fig 1 element 4, modem is associated with the network*)

associated with a server controlling access to the internet (*Chuah, fig 1, element 14: server is capable of controlling access to the internet 20*)

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include Chuah's modem and server in Amalfitano's system since this configuration is "typically utilized today to provide remote internet access through

modems to user computers" (*Chuah, column 1, lines 38-40*). This method of improving Amalfitano's system was within the ordinary ability of one of ordinary skill in the art based on the teaching of Chuah. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Amalfitano, Otis, and Chuah to obtain the invention.

27. For claim 8,

Amalfitano and Otis disclose all the subject matter of the claimed invention with the following exceptions: associated with a switching system for controlling access to an internet service provider

Chuah from the same or similar fields of endeavor discloses: associated with a switching system for controlling access to an internet service provider (*Chuah, fig 1, element 6: PSTN, public switch telephone network controls access to element 10: ISP, internet service provider*)

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include Chuah's switching system in Amalfitano's system since this configuration is "typically utilized today to provide remote internet access through modems to user computers" (*Chuah, column 1, lines 38-40*). This method of improving Amalfitano's system was within the ordinary ability of one of ordinary skill in the art based on the teaching of Chuah. Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Amalfitano, Otis, and Chuah to obtain the invention.

*Allowable Subject Matter*

28. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHOA HUYNH whose telephone number is (571) 270-



7185. The examiner can normally be reached on Monday - Thursday: 7:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SEEMA RAO can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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